

Pesticide Use Proposal (PUP) and written approval from the Authorized Officer for the use of herbicides must be obtained prior to usage of herbicides.

#### **Design Features/Mitigation under the Proposed Action**

- Prior to any surface disturbing activities an invasive plant survey will be conducted by a qualified vegetation specialist. This assessment will show the location and species of invasive or noxious plants. These findings will be presented to the BLM.
- Mobile equipment being transported from an offsite location to the ROW should be cleaned prior to arrival using water, steam, or air pressurized cleaning methods to remove any invasive or noxious weed seed and plant parts or materials that could contain seeds or plant parts. When appropriate, identify sites generally off public lands where equipment can be cleaned and seeds and plant parts can be collected and disposed of appropriately.
- All mulch, seed and other vegetative reclamation materials must be certified weed free. All sand, gravel, and fill materials shall be certified weed free.
- If weed species have been determined by the local BLM weed coordinator to encroach outside of the ROW and are determined a result of AML/Fremont County Roads, AML/Fremont County Roads will be responsible for the treatment and management of the weeds as long as the encroachment exists. In order for AML/Fremont County Roads to be released of this responsibility no plants shall be found in as many consecutive years as the seed viability for the particular plant species lasts.
- If determined by the BLM weed specialist that the project is responsible for the introduction of new weed species AML/Fremont County Roads will be responsible financially for the management. In order for the company or operator to be released of this responsibility no plants shall be found in as many consecutive years as the seed viability for the particular plant species lasts.
- Fremont County will need to control any designated noxious weeds should they begin to grow in the ROW. Cooperation with private land owners and any State Lands for a weed management plan will be necessary for proper noxious weed control.

The BLM has identified no additional surface disturbance in the CIAA for soils and vegetation which would be the same as for invasive weeds. The identified treatment of the spotted knapweed would not involve surface disturbance and would beneficially impact the weed program under both alternatives.

## **Mitigation**

In order to limit the adverse consequences likely to result from the Proposed Action, the BLM will apply the following mitigation:

- Prior to use of the Bull Rush Stockpile and potentially other areas to be inspected by the BLM in conjunction with FCWP, Fremont County will cause the identified spotted knapweed mapped locations to be treated as appropriate to eradicate the existing plants. FCWP will provide a weed management plan for monitoring and treatment subsequently identified spotted knapweed occurrences. This plan will require at least annual inspections by FCWP and/or AML's invasive species contractor.
- Any weeds resulting from disturbance associated with the project would be controlled in accordance with guidelines established by the EPA, BLM, or appropriate authorities. Prior to the use of any herbicide by any operator other than FCWP, the applicator must have a valid certified applicators license and have a current approved Pesticide Use Proposal (PUP) for the chemical being applied, submitted to and approved by BLM.
- Any vegetative mulch or erosion fabric and used will be certified weed free and free from mold or fungi. Mulch may include native hay, small grain straw, wood fiber, live mulch, cotton, jute, synthetic netting, and rock. Straw mulch should contain fibers long enough to facilitate crimping and provide the greatest cover. For purposes of this EA, mineral materials such as sand, gravel, and rock will not need to be certified weed free. However, if weeds are identified in source materials prior to mining, weed treatment will be applied and the material will not be disturbed for period of time the pesticide label recommends for effective treatment.
- Fremont County, AML and their contractors will monitor noxious weed occurrence in the project area and implement a noxious weed control program in cooperation with the BLM and Fremont and Natrona Counties to ensure noxious weed invasion does not become a problem. Weed-free certification by county extension agents will be required for grain or straw used for mulching re-vegetated areas.

### **3.4.2 Impacts to Invasive Species under the No-Action Alternative**

The current trend of increasing noxious weeds will continue under the No-Action Alternative. While vehicular use of the area is not likely to increase more than slightly because of travel limits imposed by the degraded road condition, the increasing loss of vegetation caused by erosion and road widening increases the area of disturbance. These degrading conditions will likely result in increases in noxious weed occurrences which are typically associated with soil disturbance, especially near road traffic.

Under the No-Action Alternative, the County has not assumed any inspection or treatment obligations for the project area and will likely not make it a high priority for treatment, beyond the treatment of the spotted knapweed in the locations shown on Map 4 that is common to both alternatives.

Similar to the Proposed Action, there are no reasonably foreseeable activities that would result in cumulative impacts to the direct and indirect impacts.

### **3.5 Threatened, Endangered, and Proposed Species**

Of the thirteen federally listed threatened, endangered and proposed species listed for Fremont and Natrona Counties, suitable habitat does not occur within a one-half mile of the proposed action. See the project wildlife clearance form for details regarding the habitats present in the action area for these species.

#### **Federally Listed Species**

There would be no direct, indirect or cumulative effects to any federally listed species from either alternative because suitable habitat for these species does not occur in the action area. Therefore, the Proposed Action Alternative would result in the following BIOLOGICAL DETERMINATION OF EFFECT for federally listed threatened, endangered and proposed species: NO EFFECT to interior least tern, piping plover, whooping crane, pallid sturgeon, Canada lynx, gray wolf, grizzly bear, *Pinus albicaulis*, *Platanthera praeclara*, *Spiranthes diluvialis*, *Yermo xanthocephalus*, and *Penstemon haydenii*. Designated critical habitat for Canada lynx, whooping crane and *Yermo xanthocephalus* is not in the vicinity of the proposed action area and would not be affected. Therefore the Proposed Action Alternative would result in the following BIOLOGICAL DETERMINATION OF EFFECT for federally designated critical habitat: NO EFFECT to critical habitat for Canada lynx, whooping crane and *Yermo xanthocephalus*. Section 7 consultation is not required for this project.

#### **BLM Sensitive Species**

Seventeen BLM sensitive species are known to have suitable habitat present within one-half mile of the proposed action area: greater sage-grouse, ferruginous hawk, burrowing owl, mountain plover, sage thrasher, loggerhead shrike, sage sparrow, Brewer's sparrow, spotted bat, fringed myotis, white-tailed prairie dog, northern leopard frog, Great Basin spadefoot, spotted frog, *Cleome multicaulis*, and *Rorippa calycina*. Some field surveys have been completed for these species in the one-half mile action area; non-detection does not necessarily mean absence. Occupancy is assumed if suitable habitat is present, and field data is absent, incomplete or not recent.

The existing condition within the one-half mile action area shows disturbance from past mining activity that occurred as recently as ten years ago. The area is heavily disturbed with non-system routes used to access mine infrastructure, reclamation sites, well pads, etc. Hence, for the majority of the sensitive species carried forward in this analysis, the conditions of breeding, foraging and year-round habitats are of poor quality due to these historic disturbances. The existing quality of breeding habitat for migratory birds is considered poor due to the extent of historic disturbance throughout the action area. Several ferruginous hawk and golden eagle nests are documented within the proposed action area, but their current condition and activity status is unknown.

The greater sage-grouse is a BLM special status species. In 2015, the US Fish and Wildlife Service decided that listing of greater sage-grouse under the Endangered Species Act was not warranted based in considerable part on BLM's adoption of sage-grouse conservation land-use plans. BLM land-use plans in Wyoming adopted the Core Area Strategy which emphasized conservation efforts in priority habitat management areas (PHMA). Priority habitat is also called Core Area in Wyoming. General habitat management areas (GHMA) or "non-Core Area" receive a lesser level of conservation than PHMA. The Gas Hills DDA is GHMA rather than Core or PHMA.

The Lander and Casper RMPs have seasonal timing restrictions for surface disturbing and disruptive activities in GHMA within two-miles of the perimeter of occupied sage-grouse leks. There is no mapped sage-grouse winter concentration habitat.

## **Mitigation**

The effects analysis below assumes the following design features would be incorporated into the proposed action:

1. Annually survey for raptors, especially ferruginous hawk and golden eagle, at known historic nest locations and suitable habitat, to the best of the agency's ability. Surveys would need to be conducted during the breeding season appropriate for detecting those species. Surveys would be directed by the project LFO Biologist, following pre-approved protocols and locations. Positive detection of signs of breeding would require the application of the timing constraints, unless otherwise recommended by project LFO Biologist based on field observations.
2. Annually survey known prairie dog colonies and burrowing owl locations to determine the current status of white-tailed prairie dog colonies and burrowing owl, to the best of the agency's ability. Surveys would need to be conducted during the season appropriate for detecting those species. Surveys would be directed by the project LFO Biologist, following pre-approved protocols and locations. Positive detection would require the application of the timing constraints, unless otherwise recommended by project LFO Biologist based on field observations.

3. Alternative locations for the proposed stockpiles, equipment, supplies, and other materials would be located over 500 feet from West Creek, mapped and field identified riparian- wetlands and associated corridors and away from known or discovered important habitats for BLM sensitive species (e.g. prairie dog colonies, raptor nest locations, etc). Alternative staging locations would be determined in consultation with the project LFO Biologist and Archaeologist in the field at the beginning of implementation. There will be no stockpile locations in the CFO.
4. Install an aquatic/terrestrial wildlife passage large enough to accommodate a medium sized mammal (e.g. coyote), low and high water passage on the segment of West Creek that intersects the proposed road alignment to allow connectivity, safe passage of several special status and other wildlife species, and to provide opportunity for water to flow and vegetation to exist within historic natural variability. The wildlife portion of the passage design would require approval by the project BLM LFO Biologist prior to finalization and installation; the BLM will rely on AML's determination regarding water flows and vegetation in connection with the design of the culvert.

Hibernacula, maternity roosts and bachelor roosts for long-eared myotis, fringed myotis and Townsend's big-eared bat are not known to be present in the one-half mile action area due to the lack of cliffs, trees, mine adits and other such features. Foraging habitat is present but would not be affected by the proposed activities. Since there would be no direct or indirect effects to these species, there would be no cumulative effects for these bat species.

With these design features and RMP Decisions, there would be no direct or indirect effects to ferruginous hawk, white-tailed prairie dog or burrowing owl. Breeding habitat for ferruginous hawk and burrowing owl would not be affected. Year-round habitat for white tailed prairie dog would not be affected. Individual animals of these species would still be able to find and obtain food, hiding cover and carry out other life functions. Since there would be no direct or indirect effects to these species, there would be no cumulative effects.

Since this area has never been surveyed for northern leopard frog, Great Basin spadefoot, and spotted frog, and suitable habitat occurs in the vicinity, it is assumed that suitable habitat is present and that habitat is occupied by these three species. This project would have mixed effects on these amphibians. With these stipulations and design features, benefits to northern leopard frog, Great Basin spadefoot and spotted frog would occur. The installation of one wildlife passage in the proposed road alignment would provide these species with safe passage, and ability to move and utilize their habitats. Minor effects on their riparian-wetland habitats from deposition and soil erosion from truck traffic, maintenance and grading, etc. could occur. Cumulative effects from this action when added to other past, present and foreseeable actions would be minor, mainly from the proposed road alignment paralleling the riparian corridor. Since this area has never been surveyed for *Cleome multicaulis* and *Rorippa calycina*, it is assumed suitable habitat occurs in the one-half mile action area, and the habitat is occupied. Since the majority of the proposed work would be concentrated in previously disturbed or compacted soils, and few acres of vegetation would be removed, the likelihood of impacting suitable habitat for these species is discountable. If impacts occur, then soil compaction and loss of habitat could occur. Individual plants could be buried, crushed or uprooted.

Given that the direct and indirect effects would be discountable, the cumulative effects of this action when added to past, present and future would also be discountable. Mitigation may be needed to avoid effects to these two BLM sensitive plants should they be found to occur in the area.

The Proposed Action would not affect any portion of designated core habitat for greater sage-grouse, including leks. Two leks occur within 2 miles of the project area and nesting habitat could be affected. Minor effects to general habitat would be expected but those would be concentrated adjacent to existing disturbance and existing compacted routes. Vehicle collisions may occur given this proposed action due to the increased amount of traffic, heavy equipment, duration of implementation and the connected reclamation actions although the risk of vehicle collisions would be low. Installation of a wildlife passage would reduce the likelihood of vehicle collisions.

The Proposed Action may result in a loss of breeding habitat for mountain plover, sage thrasher, loggerhead shrike, sage sparrow and Brewer's sparrow and other migratory birds. If individual birds are breeding in close proximity to the disturbance, then it is possible that vegetation removal, noise and soil disturbance could affect individual breeding pairs. Nest surveys would be required in suitable habitats from March 1<sup>st</sup> through July 15<sup>th</sup> prior to any new surface disturbing activities. Cumulative effects of this action when combined with past, present and future actions would be relatively minor given the existing habitat conditions of the proposed action area.

### **Conservation Measures for BLM Sensitive Species**

The following conservation measures are required to meet the intent of the RMP directions described for BLM sensitive species that may be affected by the Proposed Action Alternative. Some of these conservation measures address effects since the road alignment cannot be moved without causing further impacts to multiple resources. The following stipulations will be applied:

1. Survey for *Cleome multicalis* and *Rorippa calycina* during this species' flowering period within all suitable habitat located within 200 meters of the proposed ground disturbance, to the best of the agency's ability. Surveys would be directed by the project LFO Biologist, following pre-approved protocols and locations. Positive detections would require Stipulation 4075, 4076, 4079, and 4082 by employing a 200 meter spatial buffer, unless otherwise recommended by project LFO Biologist based on field observations.
2. Flag and avoid *Cleome multicalis* and *Rorippa calycina* plants with a 200 meter buffer wherever and whenever possible. Flagging and avoidance would be directed by the LFO Biologist. Alternatively, prior to ground disturbance, the project LFO Biologist would work with the State Botanist to collect plants and/or seed for plants that may be buried, excavated or permanently lost for grow operations or transplant.

3. Survey for migratory birds of concern (listed above) during the breeding season to detect signs of breeding at known and suspected sites within the action area, to the best of the agency's ability. Surface disturbing and /or disruptive activities that have potential to cause destruction or nests, eggs or young of migratory birds will be prohibited during the period of May 1<sup>th</sup> to July 15<sup>th</sup> unless otherwise recommended by project LFO Biologist based on field observations. A survey of the proposed disturbance area(s) may be conducted by the proponent to determine the presence/absence of nesting birds. Nest surveys must be conducted no more than 7 days prior to surface disturbing activities. Positive detections would require additional protective measures as recommended by the project LFO Biologist.
4. Apply seasonal timing limitations prohibiting surface disturbing or disruptive activities within two-miles of the leks. This would prohibit disruptive activities such as those that will occur under the Proposed Action during the period March 15<sup>th</sup> to June 30<sup>th</sup>. Fremont County, AML, and their respective contractors may apply for an exception to this timing limitation in accordance with the Exception, Waiver, and Cancellation Appendix to the RMP; since the Lander portion of the project will occur in the Gas Hills DDA exception waivers would routinely be granted except for species covered by the Migratory Bird Treaty Act and similar protections; see below.

### **Environmental Effects from the No Action Alternative to BLM Sensitive Species**

The No Action Alternative would be equivalent to the existing condition for BLM Sensitive Species. This alternative would not have effects on greater sage-grouse, ferruginous hawk, burrowing owl, mountain plover, sage thrasher, loggerhead shrike, sage sparrow, Brewer's sparrow, spotted bat, fringed myotis, white-tailed prairie dog, northern leopard frog, Great Basin spadefoot, spotted frog, *Cleome multicaulis*, and *Rorippa calycina*. Suitable habitat for all of these species would remain intact and would not be disturbed, covered or crushed by equipment, materials, etc. The poor condition of the existing route limits the amount and type of vehicular traffic. Current noise, disturbance, vehicle disturbance and collisions effects on special status species would not change. Construction and implementation noise, human presence and commotion would not occur and therefore disruptive activities would not occur; nesting ferruginous hawk and other birds would not be disturbed. There would be no effects to the populations of greater sage-grouse, ferruginous hawk, burrowing owl, mountain plover, sage thrasher, loggerhead shrike, sage sparrow, Brewer's sparrow, spotted bat, fringed myotis, white-tailed prairie dog, northern leopard frog, Great Basin spadefoot, spotted frog, *Cleome multicaulis*, and *Rorippa calycina* within the planning area as the result of the No Action Alternative. Since there would be no direct or indirect effects, there would be no cumulative effects to these BLM sensitive species.

## **Migratory Birds**

In addition to burrowing owl, ferruginous hawk, Brewer's sparrow, sage sparrow, sage thrasher, loggerhead shrike, and mountain plover, golden eagle has suitable habitat within one-half mile of the proposed action area. These eight migratory birds are listed as BLM sensitive species, bird species of conservation concern by Wyoming Partners in Flight or are on the US Fish and Wildlife Service Birds of Conservation Concern (BCC) – 2008 List for BCR 10-Northern Rockies. The 2010 Memorandum of Understanding between the BLM and US Fish and Wildlife Service on migratory birds (BLM MOU WO-230-2010-04 and BLM Instruction Memorandum No. 2011-007) provides guidance towards meeting the BLM's responsibilities under the Migratory Bird Treaty Act (MBTA) and Executive Order (EO) 13186. The guidance emphasizes management of habitat for migratory bird and raptor species of conservation concern by avoiding or minimizing negative impacts and restoring and enhancing habitat quality.

Breeding Bird Survey (BBS) data showed 33 breeding migratory bird species were detected in the Gas Hills BBS route include. Of these, the most notable are the following raptors and birds of conservation concern according to the Wyoming Partners In Flight Wyoming Bird Conservation Plan: red-tailed hawk, golden eagle (Level III Bird of Conservation Concern), vesper sparrow (Level II Bird of Conservation Concern), lark sparrow (Level II Bird of Conservation Concern), and lark bunting (Level II Bird of Conservation Concern) (Nicholoff 2003). Golden eagle was detected and additional protections are afforded to that species by the Bald and Golden Eagle Protection Act.

## **Effects from the Proposed Action Alternative**

The proposed action may cause a loss of a small quantity of breeding habitat for protected bird species. If individual birds are breeding in close proximity to the disturbance or disruptive activity, then it is possible that vegetation removal, noise and soil disturbance could affect individual breeding pairs. With the exception of red-tailed hawk, these would be discountable effect on these species because these birds tend to utilize more interior patches of undisturbed vegetation, which is in deficit within the proposed action area. Red-tailed hawk appears to be more tolerant of disturbed landscapes, noise, etc. than these other species, and may acclimate to disturbance and disruptive activities. . Stipulations and recommended conservation measures that avoid the breeding bird season would afford protections to red-tailed hawk, golden eagle, vesper sparrow, lark sparrow, and lark bunting, and golden eagle during breeding season. Cumulative effects of this action when combined with past, present and future actions would be relatively minor given the existing condition of the proposed action area and the discountable effects.

## **Conservation Measures for Migratory Birds**

Avoid vegetation removal, soil work and construction between May 1<sup>st</sup> and July 15<sup>th</sup>, the peak breeding season for most migratory birds, including raptors, to maintain compliance with the Migratory Bird Treaty Act. Prohibit surface disturbance and/or disruptive activity or occupancy within a 0.75 mile buffer of raptor nests, except ferruginous hawk nests which have a 1 mile buffer, from February 1<sup>st</sup> through July 31<sup>st</sup>. These dates and other timing constraints will be applied as stipulations to the authorization.



## **Effects to Greater Sage-Grouse from the Proposed Action**

The effects (adverse in the short term, beneficial after construction is completed) described above under the soil, climate change, vegetation and riparian sections will have the same type and extent on greater sage-grouse in terms of habitat degradation and subsequent improvement as construction is completed.

It is reasonable to assume that the contractors will seek exceptions from the seasonal timing constraints. Typically, the Gas Hills area may be accessible and suitable for soil work sometime in mid to late May or early June. Therefore, in some years, the applicants will want to commence construction activities during the time when the area is still subject to disturbance limitations. The BLM wildlife biologist will need to evaluate the site-specific situation in terms of where the sage grouse are in their nesting activities, based on some assumptions of regarding when lekking (breeding) and nesting activities, and weather, and will coordinate with WGFD prior to making a recommendation to the AO. .

The BLM assumes that exception requests will be granted in order to facilitate completion of the road upgrade and reclamation activities in as timely and efficient a manner as possible. If exceptions are granted, adverse impacts to nesting sage grouse could result from the Proposed Action due to the noise and traffic associated with the construction activities. Although there will be only a limited fragmentation and loss of habitat, vehicle collisions are possible, a threat to sage grouse which are often low flying or on the ground on the roads.

The dust and noise resulting from the mining, crushing, transportation and distribution of material along the road way are the type of disruptive activities that adversely affect sage grouse and will likely lead to reduced nest success. The BLM may be able to limit the degree of adverse impacts by requiring the contractor to emphasize work on areas outside of the two-mile buffer and limiting activities within the two-mile buffer to be less disruptive such as transporting material but confining crushing operations to locations outside of the two-mile protected area. The BLM will address site and situational specific BMPs at the time of processing the exception request.

The BLM has determined that the adverse impacts to sage grouse under the Proposed Action are limited in scope geographically (see Map 3) and for a relatively limited amount of time when the field conditions can support construction activities. Since these leks are in GHMA in a DDA where development is prioritized, the BLM has determined that the adverse impacts do not reach the level of significance that would require analysis under an EIS. In part, this determination is based on the extensive amount of PHMA in the landscape: 70% of the lands in the LFO are PHMA. This is also based upon the extent of existing disturbance and the relatively degraded quality of habitat near the project area because greater sage-grouse usually avoid disturbed areas and prefer taller vegetation for nesting.

## **Effects from the No Action Alternative**

The No Action Alternative would be equivalent to the existing condition for migratory birds of concern. The No Action Alternative would have no effects on migratory bird species. Suitable breeding habitat would not be affected. Prey and forage would remain available. Since there would be no construction, there would be no noise, repeated human presence, materials stockpiled or commotion; therefore there would be no disruptions to reproductive behaviors of migratory birds of concern. Since there would be no direct or indirect effects, there would be no cumulative effects to migratory birds.

## **Terrestrial Wildlife and Habitats of Concern**

A very small portion of the action area (less than 55 acres) overlaps with antelope crucial winter range on the northwest corner of the road. The Clay borrow site overlaps with antelope crucial winter range. Mule deer winter range is also present in the one-half mile action area.

According to the most current data from the National Wetlands Inventory and from BLM Proper Functioning Condition data, wetlands are present in the one-half mile action area. The large pond located on the western portion of the one-half mile action area (showing as a wetland on the NWI map) is actually a waste water holding pond from mine operations. This holding pond is not suitable riparian-wetland host sites for special status species.

West Canyon Creek flows and is perennial up to where it intersects with the existing non-system route alignment. Field observations completed in March 2016 indicate that this existing route lacks a culvert or bridge. The road did not appear to be impacting the creek in terms of soil erosion and deposition. The lack of a culvert, bridge or other features appears to be causing the water to back up, artificially creating wetlands north of the existing route. Some seepage appears to be south of the existing route. In its present condition, the existing route prohibits safe passage and connectivity of wildlife species that utilize ephemeral and perennial drainages for movement as well as habitat. The wetlands and West Canyon Creek corridor are located between 150 to 270 feet from the existing used route and the proposed route, and over 1400 feet from the proposed Clay site.

### **3.5.1 Impacts from the Proposed Action Alternative**

With design features and RMP Decisions including wildlife timing limitations, there would be no direct or indirect effects on antelope while on crucial winter range.

Mule deer, during winter and fall seasons, could be affected by the Proposed Action Alternative. Mule deer have high site fidelity and are slow to learn how to make use of other sites. The use of ground based mechanical equipment, noise and subsequent vehicle traffic, if occurring during the fall shoulder season, could cause deer to flee and expend extra energy needed to survive winter. The risk of vehicles colliding with deer would likely increase after road construction is completed since an increase in truck traffic would be expected. Since the proposed new road alignment already exists for the most part, there would be a very small amount of winter range habitat lost from new road construction.

With design features for an aquatic-wildlife passage on the proposed new road alignment, there would be minor effects on riparian-wetlands from deposition and soil erosion from truck traffic, maintenance and grading, etc. Wildlife species that depend on those areas could see a minor decreased quality of habitat as a result. The wildlife/aquatic passage would allow water, riparian-wetland vegetation and wildlife to use the riparian corridor for movement with limited collision potential. This would facilitate dispersal across the DDA to areas that provide more suitable habitat north and south, and increase connectivity for special status species, and movement towards historic natural variability.

### **3.5.2 Effects from the No Action Alternative**

Since there would be no construction and no change to the existing route, the No Action Alternative would result in the same slightly downward trend to riparian-wetlands, mule deer and their winter range, pronghorn antelope and their crucial winter range. The existing condition would still preclude safe passage and connectivity of wildlife species that utilize ephemeral and perennial drainages for movement as well as habitat.

## **3.6 Riparian Resources**

West Canyon Creek, north of the route, is the only perennial water body intersecting with the project area. Its current condition (as determined during proper functioning condition assessments) is primarily meeting PFC. North of the existing route, a small area is not in PFC because of headcuts. Erosion from the current road condition does not appear to have adversely impacted West Canyon Creek. A visual inspection of the riparian area in March, 2015, did not indicate the mechanism whereby water was passing from north side of the existing road to the south side of the road. Riparian wildlife habitat is described above under the wildlife section.

The section of the proposed new location will include culverts designed by Fremont County's engineers. Extensive engineering drawings for the road including culverts have been prepared with adequate clearance to accommodate a 25-year flood. The BLM defers to the expertise of Fremont County and its licensed engineers to adequately design sustainable roads. The County is charged with maintaining the roads.

Both Fremont County and AML are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) and the Wyoming Pollutant Discharge Elimination System (WYPDES) and will obtain all necessary permits to meet these standards. In similar projects in the Gas Hills, such as the Bullrush Reclamation Project, the practices required by SWPPP and WYPDES have been adequate to protect riparian resources during construction even during high precipitation events. The BLM defers to the expertise of Fremont County and AML to determine appropriate measures to meet the requirements of these regulations.

The impacts to riparian resources (other than as wildlife habitat) do not vary meaningfully by alternative. The culverts to be installed as part of the road upgrade and re-route will have a minor beneficial impact to riparian resources and the possibility that, over time, the No Action Alternative could result in minor adverse impacts to riparian resources are not meaningful enough differences to require detailed analysis.

There would be no measurable change in the riparian-wetland since the existing route would remain unchanged. There would not be materials or equipment staged within 500 feet of riparian-wetlands. The existing poor condition of the existing route limits the amount and type of vehicular traffic, which maintains the current noise, disturbance, vehicle disturbance and collisions at present day levels.

### **Conservation Measures for Riparian-Wetlands**

Ensure equipment, supplies, materials and other infrastructure are located/staged 500 feet from mapped and field identified riparian-wetlands and associated corridors unless the BLM determines that a shorter distance<sup>3</sup> would be adequate to protect riparian resources.

## **3.7 Visual Resources**

The BLM is responsible for identifying and protecting scenic values on public lands under several provisions of FLPMA, and NEPA requires that impacts to visual resources be addressed in NEPA analysis. The resource management plans designate one of four visual resource management classes for each part of the planning area, based upon inventory and management objectives for the area. The two visual resource classes present in this project area are:

Rattlesnake Quarry, Visual Resource Management (VRM) Class II: “The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may repeat the basic (design) elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.” (Casper RMP, as updated 2012).

The viewshed for the Rattlesnake Quarry is quite large as the quarry is visible from at least 10-15 miles away. Its prominence, due to large size and high elevation, relative to observers from below, sharply contrasts with the existing character of the landscape. The bright color of the un-weathered granite in a relatively flat vertical expanse reflects afternoon light in a way that attracts attention almost as a visual beacon.

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<sup>3</sup> Since the authorization requires that all stockpile locations be in the Lander Field Office portion of the proposed project, any stockpiles will be located in the Gas Hills Designated Development Area. Decision 4031 allows disturbance closer than 500 feet if the BLM determines that a smaller buffer will adequately protect riparian resources; see above discussion under Section 2.1.7.

The rest of the project area is VRM Class IV: “The objective of this class is to provide for management activities which require major modification to the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt will be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic element found in the predominant natural features of the characteristic landscape.”

For this part of the proposed project, the affected environment is the area within five miles of the proposed modified Dry Creek Road; an area that is larger than a linear, ground level feature would likely be seen. This area encompasses all of the stockpile locations and the Pathfinder Quarry and the Umetco Clay Pit. This area is entirely within the Gas Hills Designated Development Area (DDA) which was designated in the 2014 RMP as Visual Resource Management Class IV. The southern boundary of the viewshed area is Beaver Rim.

The Gas Hills DDA is within the Wyoming Basin physiographic province which is a landscape defined by horizontal layers of sedimentary bedrocks, often multiple colors. Some of these features have eroded formations (“badlands”) interspersed between areas of low, rolling terrain and flat-topped hills. Most of the terrain in the area is broadened and flattened, however, the Rattlesnake Quarry is on the northern end of the Rattlesnake Hills which rises, in places to almost 8,000 feet above mean sea level.

Both the Rattlesnake Hills and the DDA are shrubby with sparse vegetation dominated by sagebrush, greasewood, and saltbrush. Higher elevation pockets may have patches of conifers and aspen; however, these are at some distance from the project area. Colors in the landscape vary seasonally. Although the area greens up in wet years, the most dominant colors are muted grey-greens and tans, with some darker browns and muted reds where soils or rock outcrops are prominent.

The most prominent modifications in the vicinity are remnants of prior uranium mining and exploration activities utilizing open-Pit mining techniques. There is a network of roads, some remnants from prior mining activities, some accessing current reclamation efforts. Several former mill or processing sites are quite visible, appearing as large rock-covered features or grass covered mounds. Earlier reclamation efforts did not seek to restore pre-mining land forms; as a result, these areas stand out from the background and surrounding areas. Additionally, areas including the Day Loma and Pathfinder quarries/mines have not yet been reclaimed and are striking because they are open with little vegetation and flat or Pitted contours.

The existing road is prominent, consisting of a straight, un-vegetated linear feature (see photo on cover). It is approximately 70 to 90 feet wide with additional areas braiding out caused by motorists avoiding wet or drifted sections.

### **3.7.1 Impacts to visual resources from the Proposed Action**

The road upgrade and rerouting will have minor beneficial impacts to visual resources by reducing the amount of contrast through narrowing of the road. The new location will introduce some amount of course change which will de-emphasize the existing sharp contrast of the road from the existing vegetation. The proposed reclamation of the Rattlesnake Quarry has the possibility of benefitting visual resources by reducing the contrast of the mined site from the surrounding landscape (see photo). If funding allows for some treatment of the highwalls or planting of the benches, the benefits to visual resources will be greater. It is unlikely that meaningful reduction of the sharp contrast will occur although minor improvements may result.

The BLM did not identify any impacts to visual resources from reasonably foreseeable development.

### **3.7.2 Impacts from the No Action Alternative**

The impacts to visual resources from the No Action Alternative would be similar to the impacts as described under the affected environment above. The Rattlesnake quarry would continue to be a visual beacon within its large viewshed, and the road and other Pits would continue to be prominent in the landscape with no change. Over time, it is likely that the continued degradation of the road and the vegetation and soil damage caused by motorists avoiding muddy and dangerous sections of the road would increase the visual contrast. This increase in adverse impacts would be minor and visible only locally.

## **3.8 Water Resources**

The Rattlesnake quarry currently blocks two ephemeral drainages at the northwestern end of the Rattlesnake Hills that drain to Deer Creek, a perennial drainage. Deer Creek eventually flows into Poison Creek near Moneta, WY which generally disappears in sand downstream of Moneta but eventually/occasionally flows into Boysen Reservoir and the Wind River (which becomes the Bighorn River below Wind River Canyon, tributary to the Yellowstone River). By blocking these two ephemeral drainages, the quarry limits the availability of water in Deer Creek and causes minor erosion of stockpiled mine dump material and sedimentation within the ephemeral drainages during storm events.

The No Man's Land Road crosses several perennial drainages and ephemeral drainages including Fraser Draw and West Canyon Creek. Both creeks eventually reach Poison Creek although water generally dissipates in sand before reaching Poison Creek. The Pathfinder quarry and Umetco Clay Pit are also within these drainages, although the Pathfinder quarry is a closed Pit that does not allow flow-through drainage. Erosion from the existing road has increased sedimentation in portions of Fraser Draw and West Canyon Creek.

Deer Creek, West Canyon Creek, and Fraser Draw all have relatively low flow rates, but are considered perennial drainages. According to the Cameco EIS, the highest flows recorded in West Canyon Creek equal 9 gallons per minute (gpm), and the highest flows in Fraser Draw equal 3 gpm. Deer Creek flow is likely much lower considering it has a smaller drainage basin. Water quality within the affected drainages generally meets livestock water quality but typically has some elevated constituents of metals such as uranium and total dissolved solids concentration not exceeding 1,185 mg/L. No groundwater is currently known to be affected by the quarry and road, and groundwater resources are not anticipated to be affected through either of the alternatives.

### **3.8.1 Impacts to water resources from the Proposed Action**

Through reclamation of the Rattlesnake quarry, the two currently blocked ephemeral drainages would be restored to allow flow-through drainage to Deer Creek. This would increase the amount of water that reaches Deer Creek and downstream users during runoff events. However, construction activities might increase erosion potential and sedimentation causing short term negative impacts to these drainages, but these impacts would be minimized through implementation of the State storm water control plan AML is required to implement for construction activities. Additionally, these impacts would be balanced by the long term beneficial impacts of restoring natural flow-through drainage post site reclamation. Similarly, the existing impacts from the road to surface water would be remedied by constructing a designed and engineered road that would minimize erosion and establish appropriately sized and maintained culverts for drainage crossings. The County or its contractors would also be required to implement a storm water control plan. Water quality is not anticipated to be affected by the Proposed Action unless an unanticipated spill or leak occurs for which contractors have required spill and pollution prevention plans in place to minimize impacts.

The cumulative impacts area for water resources would be the Deer Creek and West Canyon Creek watersheds. These drainages are the principal drainages to the Gas Hills and include hundreds of acres of disturbance in various stages of reclamation or exposure. As discussed in previous sections, although mining is proposed within these drainages, including in-situ recovery mining, and one small, inactive bentonite mine is nearby, no reasonably foreseeable activities are anticipated because of the depression in pricing for uranium and bentonite. Cameco, the company which has an approved Plan of Operations, announced that it was sharply reducing its operations in the United States and was deferring wellfield development; see announcement on Cameco's webpage: <https://www.camecoresources.com/library/news/cameco-announces-operational-changes-in-saskatchewan-and-the-united-states> accessed April, 2016 and the letter in Appendix E. Therefore, the Proposed Action would only improve the overall drainage characteristics minutely in comparison to the existing impacts associated with past mining activities, and the overall cumulative negative impacts from increasing potential for erosion and sedimentation during construction would be minor if not negligible in comparison to the existing erosion and sedimentation within the affected drainages within the cumulative impacts area.

### **3.8.2 Impacts to water resources from the No Action alternative**

Implementation of the No Action alternative would result in the continuation of the mildly downward trend of water resources described under the Affected Environment section above. Ephemeral drainages would continue to be blocked at the Rattlesnake Quarry, and erosion and sedimentation from the unmaintained road could continue.



## **Chapter Four Consultation**

The BLM consulted extensively with Native American Tribes when the proposed Dry Creek Road was evaluated as part of preparation of the Cameco EIS; see Section 3.2.2.2 of that document. This consultation included field visits. The Tribes did not express any concern or raise any issues regarding the proposed Dry Creek Road.

### **List of Persons, Agencies and Organizations Consulted**

Wyoming State Historic Preservation Officer

Wyoming Department of Environmental Quality, Abandoned Mine Lands Division

Wyoming Business Council

Fremont County Commission

Fremont County Department of Transportation

Fremont County Weed and Pest Department

Cameco

Umetco

### List of Preparers

| Name  | Title  | Responsible for the Following Section(s) of this Document  |
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| Kristin Yannone                                 | Planner  | NEPA   |
| Matt Church and other Casper Field Office staff | Geologist, Wildlife Biologist, Rangeland Management Specialist | Review   |

## **References Cited**

Nicholoff, Sharon. H. 2003. Wyoming Bird Conservation Plan, Version 2.0. Wyoming Partners In Flight. Wyoming Game and Fish Department, Lander, WY. Available: <https://wgfd.wyo.gov/Wildlife-in-Wyoming/More-Wildlife/Nongame-Birds/Bird-Conservation-Plan>

## **Appendices**

### **A Maps**

Map 1 Project map showing work locations

Map 2 Transportation map

### **B Issues not carried forward for analysis**

### **C Clearances**

### **D Stipulations**

### **E Cameco's letter regarding future operations**